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**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/959,748	10/28/97	CLEMMER	F PD-30-3986DI

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HM42/0911

EXAMINER

PRYOR, A

ART UNIT

PAPER NUMBER

1616

DATE MAILED: 09/11/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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# Office Action Summary

Application No.  
**08/959,748**

Applicant(s)  
**Clemmer et al.**

Examiner  
**Alton Pryor**

Group Art Unit  
**1616**



☒ Responsive to communication(s) filed on amendment filed 6/22/98

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1035 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-9, 19, and 20 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-4, 6-9, and 19 is/are rejected.

☒ Claim(s) 5 and 20 is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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### **Final Action on the Merits**

#### ***Action Summary***

Claims 1-9 and new claims 19,20 are pending. Claims 1-4,6-9,19 are rejected. Claims 5,20 are objected to.

**I. In light of amendment filed 6/22/98, the objection to claim 6 under 37 CFR 1.75 will not be maintained.**

**II. In light of amendment filed 6/22/98, the objection to claims 10-15,17 under 35 U.S.C. 112 will be canceled.** Examiner acknowledges the applicants' deletion of said claims.

**III. In light of amendment filed 6/22/98, the rejection of claim 9 under 35 U.S.C. 103(a) will be maintained.** Examiner acknowledges the applicants' deletion of claim 18. The applicants' have overcome the rejection by amending the instant claim 9 to include "wherein the hydrogen fluoride and the chlorofluoromethane are present in the product stream in a mole ratio of at least 100:1". The examiner cites new references, Bonniface et al. (US 5,672,786 and WO 9421579) and Clemmer et al. (US 5,763,708) to establish a ground of rejection over amended claim 9, original claims 1-4,6-8 and new claim 20.

Applicant's arguments with respect to claims, 1-4,6-9,19 have been considered but are moot in view of the new ground(s) of rejection.

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***Claim Rejections under 35 U.S.C. 102(a,e)***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

**(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.**

Claims 1-4,6-9 are rejected under 35 U.S.C. 102(a) as being anticipated by Bonniface et al. (WO 9421579). Bonniface teaches the process of the instant invention. Bonniface teaches a process for the production of difluoromethane comprising (a) contacting dichloromethane with hydrogen fluoride in the presence of a fluorination catalyst (metal of the oxide, metal fluoride or oxyfluoride) to produce a product stream comprising difluoromethane, monochloromonofluoromethane and unreacted starting materials (b) separating difluoromethane from the product stream from step (a) and c) recovering difluoromethane and recycling HCFC 31 to step (a) wherein sufficient hydrogen fluoride is employed in the process such that during step (b) the molar ratio of hydrogen fluoride to monochloromonofluoromethane is at least about 100:1. See claims 1-4,6-9.

**(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.**

Claims 1-4,6-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Bonniface et al. (US 5,672,786). Bonniface teaches the process of the instant invention. Bonniface teaches a process for the production of difluoromethane comprising (a) contacting dichloromethane with

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hydrogen fluoride in the presence of a fluorination catalyst (metal of the oxide, metal fluoride or oxyfluoride) to produce a product stream comprising difluoromethane, monochloromonofluoromethane and unreacted starting materials (b) separating difluoromethane from the product stream from step (a) and c) recovering difluoromethane and recycling HCFC 31 to step (a) wherein sufficient hydrogen fluoride is employed in the process such that during step (b) the molar ratio of hydrogen fluoride to monochloromonofluoromethane is at least about 100:1. See claims 1-4,6-9.

#### ***Double Patenting Rejection***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969):

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 9,19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,5-7 of U.S. Patent No. 5,763,708. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both claim a process for producing difluoromethane comprising the vaporization of HF and dichloromethane to form difluoromethane in the presence of a fluorination catalyst as in claim 1. In addition, the instantly claims HF:chlorofluoromethane ratio of 100:1 is within the range of range of said ratio defined by claims 5-7 in US Patent 5,763,708.

***Claim Objection/Allowable Subject Matter***

Claims 5,20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not teach a process for the production of CH<sub>2</sub>F<sub>2</sub> (non-vapor production) comprising the molar ratio of HF to monochloromonofluoromethane from about 25:1 to about 75:1. In addition, the instant invention differs from US Patent 5,672,786 in that the instant invention discloses said process whereby distillation separates a top stream comprising CH<sub>2</sub>F<sub>2</sub> and HF and a bottom stream comprising HF, chlorofluoromethane, and unreacted CH<sub>2</sub>Cl<sub>2</sub>. In US Patent 5,672,786, distillation results in top stream comprising HF, chlorofluoromethane, and unreacted CH<sub>2</sub>Cl<sub>2</sub> and bottom stream comprising CH<sub>2</sub>F<sub>2</sub> and HF.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

#### ***Telephonic Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alton Pryor whose telephone number is (703) 308-4691. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jose Dees, can be reached on (703) 308-4628. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4556.

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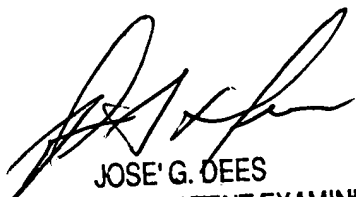
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

ANP

9/1/98

  
JOSE G. DEES  
SUPERVISORY PATENT EXAMINER  
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